

Appl. No. 09/532,398

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An image capture device, comprising:
an illumination source connected to a power source;
a model of simulation circuit, wherein said simulation circuit simulates said
illumination source, said simulation circuit comprising a circuit having a model output
and a circuit input, wherein said circuit input is connected to said power source; and,
an exposure adjustment device coupled to said circuit output, wherein
exposure adjustment device compensates that is changed to compensate for
changes in said illumination source as indicated by said model circuit output.

Claim 2 (currently amended): The image capture device of claim 1 wherein said
model ~~has a model input and said model circuit input is~~ provides an indication of the
on times and the off times of said illumination source.

Claim 3 (original): The image capture device of claim 2, further comprising:
an ambient temperature sensor producing a sensed ambient temperature
wherein said exposure adjustment is also changed to compensate for said sensed
ambient temperature.

Claim 4 (original): The image capture device of claim 3 wherein said illumination
source is at least one light emitting diode.

Claim 5 (currently amended): The image capture device of claim 4 wherein said
simulation circuit ~~model of said illumination source~~ comprises a capacitor and a
resistor.

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Claim 6 (currently amended): The image capture device of claim 4 wherein said simulation circuit model of said illumination source comprises an inductor and a resistor.

Claim 7 (original): The image capture device of claim 4 wherein said exposure adjustment changes said on times of said illumination source.

Claim 8 (currently amended): A method of compensating for changes in an illumination source, said method comprising:

modeling said simulating said illumination source using a circuit, said circuit comprising an input and an output; and;
applying a potential to said illumination source and the input of said circuit;
monitoring the potential of the output of said circuit; and
adjusting an exposure to compensate for changes in said illumination source based on said potential of the output of said circuit as indicated by said modeling.

Claim 9 (currently amended): The method of claim 8 wherein said modeling circuit provides ~~has an input that is~~ an indication of the on times and the off times of said illumination source.

Claim 10 (original): The method of claim 9 further comprising:

sensing an ambient temperature; and,
adjusting said exposure to compensate for said ambient temperature.

Claim 11 (original): The method of claim 10 wherein said illumination source is at least one light emitting diode.

Claim 12 (currently amended): The method of claim 11 wherein said circuit comprises at least one capacitor that is charged and discharged modeling is performed by charging and discharging a capacitor.

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Claim 13 (currently amended): The method of claim 12 wherein ~~said the~~ charging and discharging of said at least one capacitor is done through at least one resistor.

Claim 14 (currently amended): The method of claim 11 wherein said ~~modeling circuit comprises at least one inductor that energized and de-energized is performed by energizing and de-energizing an inductor.~~

Claim 15 (original): The method of claim 14 wherein the rate of energizing and de-energizing is determined by at least one resistor.

Claim 16 (original): An article of manufacture comprising a program storage medium having computer readable program code means embodied therein for causing the adjustment of an exposure, the computer readable program code means in said article of manufacture comprising:

computer readable program code means for causing a computer to read an indication of an illumination sources brightness from a model;

computer readable program code means for causing said computer to adjust said exposure based on said indication of said illumination sources brightness.

Claim 17 (original): The article of manufacture of claim 16 further comprising:

computer readable program code means for causing said computer to turn on and turn off said illumination source.

Claim 18 (original): The article of manufacture of claim 17 further comprising:

computer readable program code means for causing said computer to indicate to said model the on times and off times of said illumination source.

Claim 19 (original): The article of manufacture of claim 18 further comprising:

computer readable program code means for causing said computer to obtain an indication of an ambient temperature; and,

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computer readable program code means for causing said computer to adjust said exposure based on said indication of said ambient temperature.

Claim 20 (original): The article of manufacture of claim 19 wherein said illumination source is at least one light emitting diode.

Claim 21 (original): The article of manufacture of claim 20 wherein said model is a series resistor-capacitor circuit and said indication of said illumination sources brightness is obtained from the voltage across said capacitor.

Claim 22 (original): The article of manufacture of claim 20 wherein said model is a series resistor-inductor circuit.

Claim 23 (previously presented): An image capture device, comprising:

illumination means;

modeling means, said modeling means producing a modeling means output that is indicative of said illumination means relative brightness; and,

exposure adjustment means for changing an exposure to compensate for changes in said relative brightness of said illumination means as indicated by said modeling means output.

Claim 24(original): The image capture device of claim 23 wherein said modeling means has a modeling means input and said modeling means input is an indication of the on times and the off times of said illumination means.

Claim 25 (original): The image capture device of claim 24, further comprising:

ambient temperature sensor means for producing a sensed ambient temperature wherein said exposure is also changed to compensate for said sensed ambient temperature.

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Claim 26 (original): The image capture device of claim 25 wherein said illumination means is at least one light emitting diode.

Claim 27 (original): The image capture device of claim 26 wherein said modeling means comprises at least a capacitor and a resistor.

Claim 28 (original): The image capture device of claim 26 wherein said modeling comprises at least an inductor and a resistor.

Claim 29 (original): The image capture device of claim 26 wherein said exposure is adjusted by changing said on times of said illumination source.

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